

Listing of Claims:

Please make the following amendments to the specification (material to be inserted in replacement paragraphs or sections is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) optionally in double brackets [[]]).

1-27. (Canceled)

28. (Currently Amended) The kit of claim [[27]] **83**, wherein the probe is photoluminescent.

29. (Currently Amended) The kit of claim 28, wherein the photoluminescence lifetime of the probe is greater than the rotational correlation time of the unbound probe and less than the rotational correlation time of the complex formed by binding of the probe, member **or member product**, and mass label.

30. (Currently Amended) The kit of claim [[27]] **83**, wherein the probe binds to the member noncovalently.

31. (Canceled)

32. (Canceled)

33. (Currently Amended) The kit of claim [[27]] **83**, wherein the mass label is capable of specifically binding to more than one member.

34. (Currently Amended) The kit of claim [[27]] **83**, the mass label being a first mass label, further comprising a second mass label capable of specifically binding to at least one of the member, the complex formed by binding of the probe to the member, **the member product**, and the first mass label, but not to the probe alone.

35. (Original) The kit of claim 34, wherein the second mass label is capable of specifically binding to at least two first mass labels, so that the second mass label may form crosslinks between members.

36. (Original) The kit of claim 34, wherein the second mass label includes at least one of the following: avidin, biotin, lectin, sugar, and an immunological binding partner.

37. (Currently Amended) The kit of claim ~~[[27]]~~ 83, wherein the probe is not normally present in the sample.

38. (Currently Amended) The kit of claim ~~[[27]]~~ 83, wherein the mass label is not normally present in the sample.

39. (Currently Amended) The kit of claim ~~[[27]]~~ 83, wherein the property of the probe is related to a rotational diffusion coefficient of the probe.

40. (Original) The kit of claim 39, wherein the property may be measured using a technique selected from the group consisting of polarization, light scattering, and magnetic resonance.

41. (Currently Amended) The kit of claim ~~[[27]]~~ 83, wherein the property of the probe is related to the translational diffusion coefficient of the probe.

42-82. (Canceled)

83. (New) A kit for detecting the presence and/or activity of an analyte in a sample, the kit comprising:

a probe bound to a member, where the member is a compound that specifically binds to the analyte, or is a substrate for the analyte; and

a particulate mass label capable of specifically binding to the member, the complex formed by binding of the member to the analyte, or the product of the action of the analyte on the member;

wherein a measurable property of the probe is sensitive to the size of the complex formed by binding of the mass label, probe, and the member, member-analyte complex, or member product.

84. (New) The kit of claim 83, wherein the particulate mass label is selected from the group consisting of a macromolecule, a dendrimer, a glass bead, a latex bead, a polyacrylonitrile bead, and a liposome.

85. (New) The kit of claim 83, wherein the particulate mass label is a bead.

86. (New) The kit of claim 83, wherein the particulate mass label is a colloidal metal or a nanocrystal.

87. (New) The kit of claim 83, wherein the analyte is an enzyme, and the probe is bound to a member that is a substrate for the enzyme.

88. (New) The kit of claim 87, wherein the measurable property of the probe is different for the probe bound to the enzyme substrate than for the complex of the probe, the member product, and the mass label.

89. (New) The kit of claim 88, wherein the measurable property may be measured using fluorescence polarization.